



**STATE OF TENNESSEE
DEPARTMENT OF HEALTH
ENVIRONMENTAL LABORATORIES**

TDH: Lab Services JRL
Lab Services - Jackson Regional Lab
Jackson, TN 38301
731-426-0686

TDH: Lab Services KRL
Lab Services - Knoxville Regional Lab
Knoxville, TN 37920
865-549-5201

TDH: Lab Services NCL
Lab Services - Nashville Central Lab
Nashville, TN 37243
615-262-6300

Sent To: Greg Denton
TDEC-WPC
6th Floor, L & C Tower Annex
401 Church Street
Nashville, TN 37243-1534

Michael Atchley
TDEC-WPC
Knoxville FO
3711 Middlebrook Pike
Knoxville, TN 37921

Lab ID: K00002560
Knoxville Regional Laboratory

Sampling Agency: TDEC: Division of Water Pollution Control

Billing Code: 327.34-20

This is to certify that the following results were determined using
good laboratory practices and in accordance with federal or state
approved methodologies.


Analytical Supervisor

Lab-Sample Number: K00002560001
Project Name: TVA-Ash Spill
Sample Description: Emory River mile 12.1
Sampler Project Name: TVA Ash Spill
Project Site No.: 1
Station No.: EMORY012.1RO
Date/Time Collected: 07/07/2009 09:45
Sampler's Name: Geoff Klein
County: ROANE - 73
Sample Matrix: Water
EFO: Knoxville
Sampling Agency: TDEC-WPC
Billing Code: 327.34-20
Send Report To: TDEC-WPC
Agency Invoiced: TDEC-WPC
Priority Date:
Date/Time Received: 07/07/2009 14:04
Received By: S Staller

Field Determinations
pH: 7.12 pH Units
Chlorine, residual:
Conductivity: 108 uMHO
Temperature: 24.87
Dissolved Oxygen: 4.96 mg/L
Other:
Flow: CFS

TEST: Alkalinity, Total		METHOD: EPA 310.2				
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Total Alkalinity	24	mg/L	3.8	10	M Chen	7/15/2009

TEST: Hardness, Calcium		METHOD: SM 3500-Ca D				
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Calcium hardness	23	mg/L	0.7	1	M Chen	7/20/2009

TEST: Residue, Settleable		METHOD: SM 2540F				
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Settleable Residue	U	ml/L	0.10	0.10	P Leathers	7/8/2009

TEST: Residue, Suspended		METHOD: SM 2540D				
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Total Suspended Solids	U	mg/L	10	10	A Peebles	7/10/2009

J - Estimated value between MDL and MQL

MDL - Method Detection Limit

MQL - Method Quantitation Limit

U - Undetected

Lab-Sample Number: K00002560002
Project Name: TVA-Ash Spill
Sample Description: Emory River mile 2.1
Sampler Project Name: TVA Ash Spill
Project Site No.: 2
Station No.: EMORY002.1RO
Date/Time Collected: 07/07/2009 10:45
Sampler's Name: Geoff Klein
County: ROANE - 73
Sample Matrix: Water
EFO: Knoxville
Sampling Agency: TDEC-WPC
Billing Code: 327.34-20
Send Report To: TDEC-WPC
Agency Invoiced: TDEC-WPC
Priority Date:
Date/Time Received: 07/07/2009 14:04
Received By: S Staller

Field Determinations
pH: 7.91 pH Units
Chlorine, residual:
Conductivity: 131 uMHO
Temperature: 26.53
Dissolved Oxygen: 8.17 mg/L
Other:
Flow: CFS

TEST: Alkalinity, Total		METHOD: EPA 310.2				
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Total Alkalinity	38	mg/L	3.8	10	M Chen	7/15/2009

TEST: Hardness, Calcium		METHOD: SM 3500-Ca D				
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Calcium hardness	35	mg/L	0.7	1	M Chen	7/20/2009

TEST: Residue, Settleable		METHOD: SM 2540F				
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Settleable Residue	U	ml/L	0.10	0.10	P Leathers	7/8/2009

TEST: Residue, Suspended		METHOD: SM 2540D				
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Total Suspended Solids	21	mg/L	10	10	A Peebles	7/10/2009

J - Estimated value between MDL and MQL

MDL - Method Detection Limit

MQL - Method Quantitation Limit

U - Undetected

Lab-Sample Number: K00002560003
Project Name: TVA-Ash Spill
Sample Description: Approx 100' d/s from middle dredge point
Sampler Project Name: TVA Ash Spill
Project Site No.: 2A
Station No.: Dredge Plume
Date/Time Collected: 07/07/2009 10:55
Sampler's Name: Geoff Klein
County: ROANE - 73
Sample Matrix: Water
EFO: Knoxville
Sampling Agency: TDEC-WPC
Billing Code: 327.34-20
Send Report To: TDEC-WPC
Agency Invoiced: TDEC-WPC
Priority Date:
Date/Time Received: 07/07/2009 14:04
Received By: S Staller

Field Determinations
pH: 8.36 pH Units
Chlorine, residual:
Conductivity: 210 uMHO
Temperature: 24.88
Dissolved Oxygen: 9.47 mg/L
Other:
Flow: CFS

TEST: Alkalinity, Total		METHOD: EPA 310.2				
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Total Alkalinity	100	mg/L	3.8	10	M Chen	7/15/2009

TEST: Hardness, Calcium		METHOD: SM 3500-Ca D				
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Calcium hardness	80	mg/L	0.7	1	M Chen	7/20/2009

TEST: Residue, Settleable		METHOD: SM 2540F				
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Settleable Residue	U	ml/L	0.10	0.10	P Leathers	7/8/2009

TEST: Residue, Suspended		METHOD: SM 2540D				
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Total Suspended Solids	15	mg/L	10	10	A Peebles	7/10/2009

J - Estimated value between MDL and MQL

MDL - Method Detection Limit

MQL - Method Quantitation Limit

U - Undetected

Lab-Sample Number: K00002560004
Project Name: TVA-Ash Spill
Sample Description: Emory River mile 1.9 at underwater weir
Sampler Project Name: TVA Ash Spill
Project Site No.: 2B
Station No.: EMORY001.9RO
Date/Time Collected: 07/07/2009 11:04
Sampler's Name: Geoff Klein
County: ROANE - 73
Sample Matrix: Water
EFO: Knoxville
Sampling Agency: TDEC-WPC
Billing Code: 327.34-20
Send Report To: TDEC-WPC
Agency Invoiced: TDEC-WPC
Priority Date:
Date/Time Received: 07/07/2009 14:04
Received By: S Staller

Field Determinations
pH: 8.48 pH Units
Chlorine, residual:
Conductivity: 199 uMHO
Temperature: 25.05
Dissolved Oxygen: 9.71 mg/L
Other:
Flow: CFS

TEST: Alkalinity, Total		METHOD: EPA 310.2				
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Total Alkalinity	77	mg/L	3.8	10	M Chen	7/15/2009

TEST: Hardness, Calcium		METHOD: SM 3500-Ca D				
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Calcium hardness	64	mg/L	0.7	1	M Chen	7/20/2009

TEST: Residue, Settleable		METHOD: SM 2540F				
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Settleable Residue	U	ml/L	0.10	0.10	P Leathers	7/8/2009

TEST: Residue, Suspended		METHOD: SM 2540D				
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Total Suspended Solids	U	mg/L	10	10	A Peebles	7/10/2009

J - Estimated value between MDL and MQL
MDL - Method Detection Limit
MQL - Method Quantitation Limit
U - Undetected

Lab-Sample Number: K00002560005
Project Name: TVA-Ash Spill
Sample Description: Dup-Emory River mile 1.9 at underwater weir
Sampler Project Name: TVA Ash Spill
Project Site No.: 2B FD
Station No.: EMORY001.9RO
Date/Time Collected: 07/07/2009 11:04
Sampler's Name: Geoff Klein
County: ROANE - 73
Sample Matrix: Water
EFO: Knoxville
Sampling Agency: TDEC-WPC
Billing Code: 327.34-20
Send Report To: TDEC-WPC
Agency Invoiced: TDEC-WPC
Priority Date:
Date/Time Received: 07/07/2009 14:04
Received By: S Staller

Field Determinations
pH: 8.48 pH Units
Chlorine, residual:
Conductivity: 199 uMHO
Temperature: 25.05
Dissolved Oxygen: 9.71 mg/L
Other:
Flow: CFS

TEST: Alkalinity, Total		METHOD: EPA 310.2				
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Total Alkalinity	76	mg/L	3.8	10	M Chen	7/15/2009

TEST: Hardness, Calcium		METHOD: SM 3500-Ca D				
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Calcium hardness	63	mg/L	0.7	1	M Chen	7/20/2009

TEST: Residue, Settleable		METHOD: SM 2540F				
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Settleable Residue	U	ml/L	0.10	0.10	P Leathers	7/8/2009

TEST: Residue, Suspended		METHOD: SM 2540D				
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Total Suspended Solids	U	mg/L	10	10	A Peebles	7/10/2009

J - Estimated value between MDL and MQL
MDL - Method Detection Limit
MQL - Method Quantitation Limit
U - Undetected

Lab-Sample Number: K00002560006
Project Name: TVA-Ash Spill
Sample Description: Field Blank-Emory River mile 1.9 at underwater
Sampler Project Name: TVA Ash Spill
Project Site No.: 2B FB
Station No.: EMORY001.9RO
Date/Time Collected: 07/07/2009 11:04
Sampler's Name: Geoff Klein
County: ROANE - 73
Sample Matrix: Water
EFO: Knoxville
Sampling Agency: TDEC-WPC
Billing Code: 327.34-20
Send Report To: TDEC-WPC
Agency Invoiced: TDEC-WPC
Priority Date:
Date/Time Received: 07/07/2009 14:04
Received By: S Staller

Field Determinations

pH:
Chlorine, residual:
Conductivity:
Temperature:
Dissolved Oxygen:
Other:
Flow: CFS

TEST: Alkalinity, Total		METHOD: EPA 310.2				
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Total Alkalinity	U	mg/L	3.8	10	M Chen	7/15/2009

TEST: Hardness, Calcium		METHOD: SM 3500-Ca D				
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Calcium hardness	U	mg/L	0.7	1	M Chen	7/20/2009

TEST: Residue, Suspended		METHOD: SM 2540D				
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Total Suspended Solids	U	mg/L	10	10	A Peebles	7/10/2009

J - Estimated value between MDL and MQL
MDL - Method Detection Limit
MQL - Method Quantitation Limit
U - Undetected

Lab-Sample Number: K00002560007
Project Name: TVA-Ash Spill
Sample Description: Emory River mile 1.7
Sampler Project Name: TVA Ash Spill
Project Site No.: 3
Station No.: EMORY001.7RO
Date/Time Collected: 07/07/2009 11:17
Sampler's Name: Geoff Klein
County: ROANE - 73
Sample Matrix: Water
EFO: Knoxville
Sampling Agency: TDEC-WPC
Billing Code: 327.34-20
Send Report To: TDEC-WPC
Agency Invoiced: TDEC-WPC
Priority Date:
Date/Time Received: 07/07/2009 14:04
Received By: S Staller

Field Determinations
pH: 8.77 pH Units
Chlorine, residual:
Conductivity: 253 uMHO
Temperature: 25.34
Dissolved Oxygen: 11.28 mg/L
Other:
Flow: CFS

TEST: Alkalinity, Total		METHOD: EPA 310.2				
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Total Alkalinity	110	mg/L	3.8	10	M Chen	7/15/2009

TEST: Hardness, Calcium		METHOD: SM 3500-Ca D				
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Calcium hardness	91	mg/L	0.7	1	M Chen	7/20/2009

TEST: Residue, Settleable		METHOD: SM 2540F				
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Settleable Residue	U	ml/L	0.10	0.10	P Leathers	7/8/2009

TEST: Residue, Suspended		METHOD: SM 2540D				
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Total Suspended Solids	U	mg/L	10	10	A Peebles	7/10/2009

J - Estimated value between MDL and MQL
MDL - Method Detection Limit
MQL - Method Quantitation Limit
U - Undetected

Lab-Sample Number: K00002560008
Project Name: TVA-Ash Spill
Sample Description: Emory River mile 0.1
Sampler Project Name: TVA Ash Spill
Project Site No.: 4
Station No.: EMORY000.1RO
Date/Time Collected: 07/07/2009 11:26
Sampler's Name: Geoff Klein
County: ROANE - 73
Sample Matrix: Water
EFO: Knoxville
Sampling Agency: TDEC-WPC
Billing Code: 327.34-20
Send Report To: TDEC-WPC
Agency Invoiced: TDEC-WPC
Priority Date:
Date/Time Received: 07/07/2009 14:04
Received By: S Staller

Field Determinations
pH: 8.80 pH Units
Chlorine, residual:
Conductivity: 247 uMHO
Temperature: 25.50
Dissolved Oxygen: 11.75 mg/L
Other:
Flow: CFS

TEST: Alkalinity, Total		METHOD: EPA 310.2				
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Total Alkalinity	100	mg/L	3.8	10	M Chen	7/15/2009

TEST: Hardness, Calcium		METHOD: SM 3500-Ca D				
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Calcium hardness	82	mg/L	0.7	1	M Chen	7/20/2009

TEST: Residue, Settleable		METHOD: SM 2540F				
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Settleable Residue	U	ml/L	0.10	0.10	P Leathers	7/8/2009

TEST: Residue, Suspended		METHOD: SM 2540D				
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Total Suspended Solids	13	mg/L	10	10	A Peeples	7/10/2009

J - Estimated value between MDL and MQL
MDL - Method Detection Limit
MQL - Method Quantitation Limit
U - Undetected

Lab-Sample Number: K00002560009
Project Name: TVA-Ash Spill
Sample Description: Clinch River mile 2.3
Sampler Project Name: TVA Ash Spill
Project Site No.: 5
Station No.: CLINC002.3RO
Date/Time Collected: 07/07/2009 11:37
Sampler's Name: Geoff Klein
County: ROANE - 73
Sample Matrix: Water
EFO: Knoxville
Sampling Agency: TDEC-WPC
Billing Code: 327.34-20
Send Report To: TDEC-WPC
Agency Invoiced: TDEC-WPC
Priority Date:
Date/Time Received: 07/07/2009 14:04
Received By: S Staller

Field Determinations
pH: 8.32 pH Units
Chlorine, residual:
Conductivity: 272 uMHO
Temperature: 25.23
Dissolved Oxygen: 9.63 mg/L
Other:
Flow: CFS

TEST: Alkalinity, Total		METHOD: EPA 310.2				
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Total Alkalinity	96	mg/L	3.8	10	M Chen	7/15/2009

TEST: Hardness, Calcium		METHOD: SM 3500-Ca D				
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Calcium hardness	83	mg/L	0.7	1	M Chen	7/20/2009

TEST: Residue, Settleable		METHOD: SM 2540F				
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Settleable Residue	U	ml/L	0.10	0.10	P Leathers	7/8/2009

TEST: Residue, Suspended		METHOD: SM 2540D				
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Total Suspended Solids	10	mg/L	10	10	A Peebles	7/10/2009

J - Estimated value between MDL and MQL
MDL - Method Detection Limit
MQL - Method Quantitation Limit
U - Undetected

Lab-Sample Number: K00002560010
Project Name: TVA-Ash Spill
Sample Description: Clinch River TVA Discharge point
Sampler Project Name: TVA Ash Spill
Project Site No.: 5A
Station No.: KingAshOutF2
Date/Time Collected: 07/07/2009 11:44
Sampler's Name: Geoff Klein
County: ROANE - 73
Sample Matrix: Water
EFO: Knoxville
Sampling Agency: TDEC-WPC
Billing Code: 327.34-20
Send Report To: TDEC-WPC
Agency Invoiced: TDEC-WPC
Priority Date:
Date/Time Received: 07/07/2009 14:04
Received By: S Staller

Field Determinations
pH: 8.02 pH Units
Chlorine, residual:
Conductivity: 272 uMHO
Temperature: 25.34
Dissolved Oxygen: 8.38 mg/L
Other:
Flow: CFS

TEST: Alkalinity, Total		METHOD: EPA 310.2				
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Total Alkalinity	99	mg/L	3.8	10	M Chen	7/15/2009

TEST: Hardness, Calcium		METHOD: SM 3500-Ca D				
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Calcium hardness	84	mg/L	0.7	1	M Chen	7/20/2009

TEST: Residue, Settleable		METHOD: SM 2540F				
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Settleable Residue	U	ml/L	0.10	0.10	P Leathers	7/8/2009

TEST: Residue, Suspended		METHOD: SM 2540D				
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Total Suspended Solids	15	mg/L	10	10	A Peebles	7/10/2009

J - Estimated value between MDL and MQL
 MDL - Method Detection Limit
 MQL - Method Quantitation Limit
 U - Undetected

Lab-Sample Number:	K00002560011	Field Determinations	
Project Name:	TVA-Ash Spill	pH:	8.77 pH Units
Sample Description:	Clinch River mile 4.5 near Sugar Grove Valley R	Chlorine, residual:	
Sampler Project Name:	TVA Ash Spill	Conductivity:	273 uMHO
Project Site No.:	6	Temperature:	25.20
Station No.:	CLINC004.5RO	Dissolved Oxygen:	12.07 mg/L
Date/Time Collected:	07/07/2009 11:54	Other:	
Sampler's Name:	Geoff Klein	Flow:	CFS
County:	ROANE - 73		
Sample Matrix:	Water		
EFO:	Knoxville		
Sampling Agency:	TDEC-WPC		
Billing Code:	327.34-20		
Send Report To:	TDEC-WPC		
Agency Invoiced:	TDEC-WPC		
Priority Date:			
Date/Time Received:	07/07/2009 14:04		
Received By:	S Staller		

TEST: Alkalinity, Total		METHOD: EPA 310.2				
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Total Alkalinity	100	mg/L	3.8	10	M Chen	7/15/2009

TEST: Hardness, Calcium		METHOD: SM 3500-Ca D				
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Calcium hardness	86	mg/L	0.7	1	M Chen	7/20/2009

TEST: Residue, Settleable		METHOD: SM 2540F				
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Settleable Residue	U	ml/L	0.10	0.10	P Leathers	7/8/2009

TEST: Residue, Suspended		METHOD: SM 2540D				
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Total Suspended Solids	U	mg/L	10	10	A Peebles	7/10/2009

J - Estimated value between MDL and MQL
MDL - Method Detection Limit
MQL - Method Quantitation Limit
U - Undetected



**STATE OF TENNESSEE
DEPARTMENT OF HEALTH
ENVIRONMENTAL LABORATORIES**

TDH: Lab Services JRL
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Jackson, TN 38301
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TDH: Lab Services KRL
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Knoxville, TN 37920
865-549-5201

TDH: Lab Services NCL
Lab Services - Nashville Central Lab
Nashville, TN 37243
615-262-6300

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TDEC-WPC
6th Floor, L & C Tower Annex
401 Church Street
Nashville, TN 37243-1534

Michael Atchley
TDEC-WPC
Knoxville FO
3711 Middlebrook Pike
Knoxville, TN 37921

Lab ID: K00002560
Knoxville Regional Laboratory

Sampling Agency: TDEC: Division of Water Pollution Control

Billing Code: 327.34-20

This is to certify that the following results were determined using good laboratory practices and in accordance with federal or state approved methodologies.

Analytical Supervisor

Lab-Sample Number: K00002560001
Project Name: TVA-Ash Spill
Sample Description: Emory River mile 12.1
Sampler Project Name: TVA Ash Spill
Project Site No.: 1
Station No.: EMORY012.1RO
Date/Time Collected: 07/07/2009 09:45
Sampler's Name: Geoff Klein
County: ROANE - 73
Sample Matrix: Water
EFO: Knoxville
Sampling Agency: TDEC-WPC
Billing Code: 327.34-20
Send Report To: TDEC-WPC
Agency Invoiced: TDEC-WPC
Priority Date:
Date/Time Received: 07/07/2009 14:04
Received By: S Staller

Field Determinations
pH: 7.12 pH Units
Chlorine, residual:
Conductivity: 108 uMHO
Temperature: 24.87
Dissolved Oxygen: 4.96 mg/L
Other:
Flow: CFS

TEST: Digestion Metals			METHOD: EPA 200.2			
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Digestion Metals	07/10/2009				W Frye	7/10/2009

TEST: ICP			METHOD: EPA 200.7			
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Iron	160	µg/L	2.9	10	S Ufegbu	7/17/2009

TEST: ICP-MS			METHOD: EPA 200.8			
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Aluminum	35	µg/L	6.4	10	M Pattanayek	7/17/2009
Antimony	U	µg/L	0.33	1	M Pattanayek	7/17/2009
Arsenic	U	µg/L	0.93	5	M Pattanayek	7/17/2009
Barium	41	µg/L	2.5	5	M Pattanayek	7/17/2009
Beryllium	U	µg/L	0.11	1	M Pattanayek	7/17/2009
Cadmium	U	µg/L	0.41	1	M Pattanayek	7/17/2009
Chromium	U	µg/L	2.0	5	M Pattanayek	7/17/2009
Cobalt	0.24J	µg/L	0.04	1	M Pattanayek	7/17/2009
Copper	2.3	µg/L	0.38	1	M Pattanayek	7/17/2009
Lead	0.33J	µg/L	0.10	1	M Pattanayek	7/17/2009
Manganese	86	µg/L	0.42	1	M Pattanayek	7/17/2009
Nickel	1.3	µg/L	0.25	1	M Pattanayek	7/17/2009
Selenium	U	µg/L	1.3	5	M Pattanayek	7/18/2009
Silver	U	µg/L	0.03	0.25	M Pattanayek	7/17/2009
Thallium	0.37J	µg/L	0.03	1	M Pattanayek	7/17/2009
Vanadium	U	µg/L	3.4	5	M Pattanayek	7/17/2009
Zinc	3.2J	µg/L	1.9	5	M Pattanayek	7/17/2009

Lab-Sample Number: K00002560001
Project Name: TVA-Ash Spill
Sample Description: Emory River mile 12.1
Sampler Project Name: TVA Ash Spill
Project Site No.: 1
Station No.: EMORY012.1RO
Date/Time Collected: 07/07/2009 09:45
Sampler's Name: Geoff Klein
County: ROANE - 73
Sample Matrix: Water
EFO: Knoxville
Sampling Agency: TDEC-WPC
Billing Code: 327.34-20
Send Report To: TDEC-WPC
Agency Invoiced: TDEC-WPC
Priority Date:
Date/Time Received: 07/07/2009 14:04
Received By: S Staller

Field Determinations

pH: 7.12 pH Units
Chlorine, residual:
Conductivity: 108 uMHO
Temperature: 24.87
Dissolved Oxygen: 4.96 mg/L
Other:
Flow: CFS

TEST: Mercury		METHOD: EPA 245.1				
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Mercury	0.086J	µg/L	0.029	0.2	A Wilson	7/21/2009

J - Estimated value between MDL and MQL

MDL - Method Detection Limit

MQL - Method Quantitation Limit

U - Undetected

Lab-Sample Number: K00002560002
Project Name: TVA-Ash Spill
Sample Description: Emory River mile 2.1
Sampler Project Name: TVA Ash Spill
Project Site No.: 2
Station No.: EMORY002.1RO
Date/Time Collected: 07/07/2009 10:45
Sampler's Name: Geoff Klein
County: ROANE - 73
Sample Matrix: Water
EFO: Knoxville
Sampling Agency: TDEC-WPC
Billing Code: 327.34-20
Send Report To: TDEC-WPC
Agency Invoiced: TDEC-WPC
Priority Date:
Date/Time Received: 07/07/2009 14:04
Received By: S Staller

Field Determinations
pH: 7.91 pH Units
Chlorine, residual:
Conductivity: 131 uMHO
Temperature: 26.53
Dissolved Oxygen: 8.17 mg/L
Other:
Flow: CFS

TEST: Digestion Metals		METHOD: EPA 200.2				
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Digestion Metals	07/10/2009				W Frye	7/10/2009

TEST: ICP		METHOD: EPA 200.7				
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Iron	190	µg/L	2.9	10	S Ufegbu	7/17/2009

TEST: ICP-MS		METHOD: EPA 200.8				
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Aluminum	308	µg/L	6.4	10	M Pattanayek	7/17/2009
Antimony	0.33J	µg/L	0.33	1	M Pattanayek	7/17/2009
Arsenic	7.4	µg/L	0.93	5	M Pattanayek	7/17/2009
Barium	56	µg/L	2.5	5	M Pattanayek	7/17/2009
Beryllium	U	µg/L	0.11	1	M Pattanayek	7/17/2009
Cadmium	U	µg/L	0.41	1	M Pattanayek	7/17/2009
Chromium	U	µg/L	2.0	5	M Pattanayek	7/17/2009
Cobalt	0.47J	µg/L	0.04	1	M Pattanayek	7/17/2009
Copper	1.7	µg/L	0.38	1	M Pattanayek	7/17/2009
Lead	0.59J	µg/L	0.10	1	M Pattanayek	7/17/2009
Manganese	64	µg/L	0.42	1	M Pattanayek	7/17/2009
Nickel	1.4	µg/L	0.25	1	M Pattanayek	7/17/2009
Selenium	U	µg/L	1.3	5	M Pattanayek	7/18/2009
Silver	U	µg/L	0.03	0.25	M Pattanayek	7/17/2009
Thallium	0.30J	µg/L	0.03	1	M Pattanayek	7/17/2009
Vanadium	5.5	µg/L	3.4	5	M Pattanayek	7/17/2009
Zinc	6.9	µg/L	1.9	5	M Pattanayek	7/17/2009

Lab-Sample Number: K00002560002
Project Name: TVA-Ash Spill
Sample Description: Emory River mile 2.1
Sampler Project Name: TVA Ash Spill
Project Site No.: 2
Station No.: EMORY002.1RO
Date/Time Collected: 07/07/2009 10:45
Sampler's Name: Geoff Klein
County: ROANE - 73
Sample Matrix: Water
EFO: Knoxville
Sampling Agency: TDEC-WPC
Billing Code: 327.34-20
Send Report To: TDEC-WPC
Agency Invoiced: TDEC-WPC
Priority Date:
Date/Time Received: 07/07/2009 14:04
Received By: S Staller

Field Determinations
pH: 7.91 pH Units
Chlorine, residual:
Conductivity: 131 uMHO
Temperature: 26.53
Dissolved Oxygen: 8.17 mg/L
Other:
Flow: CFS

TEST: Mercury		METHOD: EPA 245.1				
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Mercury	U	µg/L	0.029	0.2	A Wilson	7/21/2009

J - Estimated value between MDL and MQL
 MDL - Method Detection Limit
 MQL - Method Quantitation Limit
 U - Undetected

Lab-Sample Number: K00002560003
Project Name: TVA-Ash Spill
Sample Description: Approx 100' d/s from middle dredge point
Sampler Project Name: TVA Ash Spill
Project Site No.: 2A
Station No.: Dredge Plume
Date/Time Collected: 07/07/2009 10:55
Sampler's Name: Geoff Klein
County: ROANE - 73
Sample Matrix: Water
EFO: Knoxville
Sampling Agency: TDEC-WPC
Billing Code: 327.34-20
Send Report To: TDEC-WPC
Agency Invoiced: TDEC-WPC
Priority Date:
Date/Time Received: 07/07/2009 14:04
Received By: S Staller

Field Determinations
pH: 8.36 pH Units
Chlorine, residual:
Conductivity: 210 uMHO
Temperature: 24.88
Dissolved Oxygen: 9.47 mg/L
Other:
Flow: CFS

TEST: Digestion Metals		METHOD: EPA 200.2				
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Digestion Metals	07/10/2009				W Frye	7/10/2009

TEST: ICP		METHOD: EPA 200.7				
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Iron	120	µg/L	2.9	10	S Ufegbu	7/17/2009

TEST: ICP-MS		METHOD: EPA 200.8				
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Aluminum	130	µg/L	6.4	10	M Pattanayek	7/17/2009
Antimony	U	µg/L	0.33	1	M Pattanayek	7/17/2009
Arsenic	3.8J	µg/L	0.93	5	M Pattanayek	7/17/2009
Barium	47	µg/L	2.5	5	M Pattanayek	7/17/2009
Beryllium	U	µg/L	0.11	1	M Pattanayek	7/17/2009
Cadmium	U	µg/L	0.41	1	M Pattanayek	7/17/2009
Chromium	U	µg/L	2.0	5	M Pattanayek	7/17/2009
Cobalt	0.33J	µg/L	0.04	1	M Pattanayek	7/17/2009
Copper	5.2	µg/L	0.38	1	M Pattanayek	7/17/2009
Lead	0.41J	µg/L	0.10	1	M Pattanayek	7/17/2009
Manganese	53	µg/L	0.42	1	M Pattanayek	7/17/2009
Nickel	1.3	µg/L	0.25	1	M Pattanayek	7/17/2009
Selenium	U	µg/L	1.3	5	M Pattanayek	7/18/2009
Silver	U	µg/L	0.03	0.25	M Pattanayek	7/17/2009
Thallium	0.15J	µg/L	0.03	1	M Pattanayek	7/17/2009
Vanadium	5.8	µg/L	3.4	5	M Pattanayek	7/17/2009
Zinc	5.8	µg/L	1.9	5	M Pattanayek	7/17/2009

Lab-Sample Number: K00002560003
Project Name: TVA-Ash Spill
Sample Description: Approx 100' d/s from middle dredge point
Sampler Project Name: TVA Ash Spill
Project Site No.: 2A
Station No.: Dredge Plume
Date/Time Collected: 07/07/2009 10:55
Sampler's Name: Geoff Klein
County: ROANE - 73
Sample Matrix: Water
EFO: Knoxville
Sampling Agency: TDEC-WPC
Billing Code: 327.34-20
Send Report To: TDEC-WPC
Agency Invoiced: TDEC-WPC
Priority Date:
Date/Time Received: 07/07/2009 14:04
Received By: S Staller

Field Determinations
pH: 8.36 pH Units
Chlorine, residual:
Conductivity: 210 uMHO
Temperature: 24.88
Dissolved Oxygen: 9.47 mg/L
Other:
Flow: CFS

TEST: Mercury		METHOD: EPA 245.1				
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Mercury	0.069J	µg/L	0.029	0.2	A Wilson	7/21/2009

J - Estimated value between MDL and MQL
 MDL - Method Detection Limit
 MQL - Method Quantitation Limit
 U - Undetected

Lab-Sample Number: K00002560004
Project Name: TVA-Ash Spill
Sample Description: Emory River mile 1.9 at underwater weir
Sampler Project Name: TVA Ash Spill
Project Site No.: 2B
Station No.: EMORY001.9RO
Date/Time Collected: 07/07/2009 11:04
Sampler's Name: Geoff Klein
County: ROANE - 73
Sample Matrix: Water
EFO: Knoxville
Sampling Agency: TDEC-WPC
Billing Code: 327.34-20
Send Report To: TDEC-WPC
Agency Invoiced: TDEC-WPC
Priority Date:
Date/Time Received: 07/07/2009 14:04
Received By: S Staller

Field Determinations
pH: 8.48 pH Units
Chlorine, residual:
Conductivity: 199 uMHO
Temperature: 25.05
Dissolved Oxygen: 9.71 mg/L
Other:
Flow: CFS

TEST: Digestion Metals			METHOD: EPA 200.2			
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Digestion Metals	07/10/2009				W Frye	7/10/2009

TEST: ICP			METHOD: EPA 200.7			
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Iron	110	µg/L	2.9	10	S Ufegbu	7/17/2009

TEST: ICP-MS			METHOD: EPA 200.8			
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Aluminum	120	µg/L	6.4	10	M Pattanayek	7/17/2009
Antimony	U	µg/L	0.33	1	M Pattanayek	7/17/2009
Arsenic	4.9J	µg/L	0.93	5	M Pattanayek	7/17/2009
Barium	54	µg/L	2.5	5	M Pattanayek	7/17/2009
Beryllium	U	µg/L	0.11	1	M Pattanayek	7/17/2009
Cadmium	U	µg/L	0.41	1	M Pattanayek	7/17/2009
Chromium	U	µg/L	2.0	5	M Pattanayek	7/17/2009
Cobalt	0.31J	µg/L	0.04	1	M Pattanayek	7/17/2009
Copper	3.5	µg/L	0.38	1	M Pattanayek	7/17/2009
Lead	0.38J	µg/L	0.10	1	M Pattanayek	7/17/2009
Manganese	57	µg/L	0.42	1	M Pattanayek	7/17/2009
Nickel	1.4	µg/L	0.25	1	M Pattanayek	7/17/2009
Selenium	U	µg/L	1.3	5	M Pattanayek	7/18/2009
Silver	U	µg/L	0.03	0.25	M Pattanayek	7/17/2009
Thallium	0.13J	µg/L	0.03	1	M Pattanayek	7/17/2009
Vanadium	U	µg/L	3.4	5	M Pattanayek	7/17/2009
Zinc	3.4J	µg/L	1.9	5	M Pattanayek	7/17/2009

Lab-Sample Number: K00002560004
Project Name: TVA-Ash Spill
Sample Description: Emory River mile 1.9 at underwater weir
Sampler Project Name: TVA Ash Spill
Project Site No.: 2B
Station No.: EMORY001.9RO
Date/Time Collected: 07/07/2009 11:04
Sampler's Name: Geoff Klein
County: ROANE - 73
Sample Matrix: Water
EFO: Knoxville
Sampling Agency: TDEC-WPC
Billing Code: 327.34-20
Send Report To: TDEC-WPC
Agency Invoiced: TDEC-WPC
Priority Date:
Date/Time Received: 07/07/2009 14:04
Received By: S Staller

Field Determinations
pH: 8.48 pH Units
Chlorine, residual:
Conductivity: 199 uMHO
Temperature: 25.05
Dissolved Oxygen: 9.71 mg/L
Other:
Flow: CFS

TEST: Mercury		METHOD: EPA 245.1				
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Mercury	0.054J	µg/L	0.029	0.2	A Wilson	7/21/2009

J - Estimated value between MDL and MQL

MDL - Method Detection Limit

MQL - Method Quantitation Limit

U - Undetected

Lab-Sample Number: K00002560005
Project Name: TVA-Ash Spill
Sample Description: Dup-Emory River mile 1.9 at underwater weir
Sampler Project Name: TVA Ash Spill
Project Site No.: 2B FD
Station No.: EMORY001.9RO
Date/Time Collected: 07/07/2009 11:04
Sampler's Name: Geoff Klein
County: ROANE - 73
Sample Matrix: Water
EFO: Knoxville
Sampling Agency: TDEC-WPC
Billing Code: 327.34-20
Send Report To: TDEC-WPC
Agency Invoiced: TDEC-WPC
Priority Date:
Date/Time Received: 07/07/2009 14:04
Received By: S Staller

Field Determinations
pH: 8.48 pH Units
Chlorine, residual:
Conductivity: 199 uMHO
Temperature: 25.05
Dissolved Oxygen: 9.71 mg/L
Other:
Flow: CFS

TEST: Digestion Metals		METHOD: EPA 200.2				
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Digestion Metals	07/10/2009				W Frye	7/10/2009

TEST: ICP		METHOD: EPA 200.7				
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Iron	110	µg/L	2.9	10	S Ufegbu	7/17/2009

TEST: ICP-MS		METHOD: EPA 200.8				
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Aluminum	120	µg/L	6.4	10	M Pattanayek	7/17/2009
Antimony	U	µg/L	0.33	1	M Pattanayek	7/17/2009
Arsenic	3.9J	µg/L	0.93	5	M Pattanayek	7/17/2009
Barium	53	µg/L	2.5	5	M Pattanayek	7/17/2009
Beryllium	U	µg/L	0.11	1	M Pattanayek	7/17/2009
Cadmium	U	µg/L	0.41	1	M Pattanayek	7/17/2009
Chromium	U	µg/L	2.0	5	M Pattanayek	7/17/2009
Cobalt	0.33J	µg/L	0.04	1	M Pattanayek	7/17/2009
Copper	1.6	µg/L	0.38	1	M Pattanayek	7/17/2009
Lead	0.30J	µg/L	0.10	1	M Pattanayek	7/17/2009
Manganese	57	µg/L	0.42	1	M Pattanayek	7/17/2009
Nickel	1.3	µg/L	0.25	1	M Pattanayek	7/17/2009
Selenium	U	µg/L	1.3	5	M Pattanayek	7/18/2009
Silver	U	µg/L	0.03	0.25	M Pattanayek	7/17/2009
Thallium	0.10J	µg/L	0.03	1	M Pattanayek	7/17/2009
Vanadium	6.5	µg/L	3.4	5	M Pattanayek	7/17/2009
Zinc	3.1J	µg/L	1.9	5	M Pattanayek	7/17/2009

Lab-Sample Number: K00002560005
Project Name: TVA-Ash Spill
Sample Description: Dup-Emory River mile 1.9 at underwater weir
Sampler Project Name: TVA Ash Spill
Project Site No.: 2B FD
Station No.: EMORY001.9RO
Date/Time Collected: 07/07/2009 11:04
Sampler's Name: Geoff Klein
County: ROANE - 73
Sample Matrix: Water
EFO: Knoxville
Sampling Agency: TDEC-WPC
Billing Code: 327.34-20
Send Report To: TDEC-WPC
Agency Invoiced: TDEC-WPC
Priority Date:
Date/Time Received: 07/07/2009 14:04
Received By: S Staller

Field Determinations

pH: 8.48 pH Units
Chlorine, residual:
Conductivity: 199 uMHO
Temperature: 25.05
Dissolved Oxygen: 9.71 mg/L
Other:
Flow: CFS

TEST: Mercury		METHOD: EPA 245.1				
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Mercury	U	µg/L	0.029	0.2	A Wilson	7/21/2009

J - Estimated value between MDL and MQL

MDL - Method Detection Limit

MQL - Method Quantitation Limit

U - Undetected

Lab-Sample Number: K00002560006
Project Name: TVA-Ash Spill
Sample Description: Field Blank-Emory River mile 1.9 at underwater
Sampler Project Name: TVA Ash Spill
Project Site No.: 2B FB
Station No.: EMORY001.9RO
Date/Time Collected: 07/07/2009 11:04
Sampler's Name: Geoff Klein
County: ROANE - 73
Sample Matrix: Water
EFO: Knoxville
Sampling Agency: TDEC-WPC
Billing Code: 327.34-20
Send Report To: TDEC-WPC
Agency Invoiced: TDEC-WPC
Priority Date:
Date/Time Received: 07/07/2009 14:04
Received By: S Staller

Field Determinations

pH:
Chlorine, residual:
Conductivity:
Temperature:
Dissolved Oxygen:
Other:
Flow: CFS

TEST: Digestion Metals		METHOD: EPA 200.2				
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Digestion Metals	07/10/2009				W Frye	7/10/2009

TEST: ICP		METHOD: EPA 200.7				
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Iron	U	µg/L	2.9	10	S Ufegbu	7/17/2009

TEST: ICP-MS		METHOD: EPA 200.8				
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Aluminum	U	µg/L	6.4	10	M Pattanayek	7/17/2009
Antimony	U	µg/L	0.33	1	M Pattanayek	7/17/2009
Arsenic	1.2J	µg/L	0.93	5	M Pattanayek	7/17/2009
Barium	U	µg/L	2.5	5	M Pattanayek	7/17/2009
Beryllium	U	µg/L	0.11	1	M Pattanayek	7/17/2009
Cadmium	U	µg/L	0.41	1	M Pattanayek	7/17/2009
Chromium	U	µg/L	2.0	5	M Pattanayek	7/17/2009
Cobalt	U	µg/L	0.04	1	M Pattanayek	7/17/2009
Copper	U	µg/L	0.38	1	M Pattanayek	7/17/2009
Lead	U	µg/L	0.10	1	M Pattanayek	7/17/2009
Manganese	0.60J	µg/L	0.42	1	M Pattanayek	7/17/2009
Nickel	0.55J	µg/L	0.25	1	M Pattanayek	7/17/2009
Selenium	U	µg/L	1.3	5	M Pattanayek	7/18/2009
Silver	U	µg/L	0.03	0.25	M Pattanayek	7/17/2009
Thallium	0.030J	µg/L	0.03	1	M Pattanayek	7/17/2009
Vanadium	U	µg/L	3.4	5	M Pattanayek	7/17/2009
Zinc	U	µg/L	1.9	5	M Pattanayek	7/17/2009

Lab-Sample Number: K00002560006
Project Name: TVA-Ash Spill
Sample Description: Field Blank-Emory River mile 1.9 at underwater
Sampler Project Name: TVA Ash Spill
Project Site No.: 2B FB
Station No.: EMORY001.9RO
Date/Time Collected: 07/07/2009 11:04
Sampler's Name: Geoff Klein
County: ROANE - 73
Sample Matrix: Water
EFO: Knoxville
Sampling Agency: TDEC-WPC
Billing Code: 327.34-20
Send Report To: TDEC-WPC
Agency Invoiced: TDEC-WPC
Priority Date:
Date/Time Received: 07/07/2009 14:04
Received By: S Staller

Field Determinations

pH:
Chlorine, residual:
Conductivity:
Temperature:
Dissolved Oxygen:
Other:
Flow: CFS

TEST: Mercury		METHOD: EPA 245.1					
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE	
Mercury	U	µg/L	0.029	0.2	A Wilson	7/21/2009	

J - Estimated value between MDL and MQL

MDL - Method Detection Limit

MQL - Method Quantitation Limit

U - Undetected

Lab-Sample Number: K00002560007
Project Name: TVA-Ash Spill
Sample Description: Emory River mile 1.7
Sampler Project Name: TVA Ash Spill
Project Site No.: 3
Station No.: EMORY001.7RO
Date/Time Collected: 07/07/2009 11:17
Sampler's Name: Geoff Klein
County: ROANE - 73
Sample Matrix: Water
EFO: Knoxville
Sampling Agency: TDEC-WPC
Billing Code: 327.34-20
Send Report To: TDEC-WPC
Agency Invoiced: TDEC-WPC
Priority Date:
Date/Time Received: 07/07/2009 14:04
Received By: S Staller

Field Determinations
pH: 8.77 pH Units
Chlorine, residual:
Conductivity: 253 uMHO
Temperature: 25.34
Dissolved Oxygen: 11.28 mg/L
Other:
Flow: CFS

TEST: Digestion Metals		METHOD: EPA 200.2				
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Digestion Metals	07/10/2009				W Frye	7/10/2009

TEST: ICP		METHOD: EPA 200.7				
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Iron	100	µg/L	2.9	10	S Ufegbu	7/17/2009

TEST: ICP-MS		METHOD: EPA 200.8				
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Aluminum	110	µg/L	6.4	10	M Pattanayek	7/17/2009
Antimony	U	µg/L	0.33	1	M Pattanayek	7/17/2009
Arsenic	4.4J	µg/L	0.93	5	M Pattanayek	7/17/2009
Barium	51	µg/L	2.5	5	M Pattanayek	7/17/2009
Beryllium	U	µg/L	0.11	1	M Pattanayek	7/17/2009
Cadmium	U	µg/L	0.41	1	M Pattanayek	7/17/2009
Chromium	U	µg/L	2.0	5	M Pattanayek	7/17/2009
Cobalt	0.34J	µg/L	0.04	1	M Pattanayek	7/17/2009
Copper	2.9	µg/L	0.38	1	M Pattanayek	7/17/2009
Lead	0.38J	µg/L	0.10	1	M Pattanayek	7/17/2009
Manganese	58	µg/L	0.42	1	M Pattanayek	7/17/2009
Nickel	1.5	µg/L	0.25	1	M Pattanayek	7/17/2009
Selenium	U	µg/L	1.3	5	M Pattanayek	7/18/2009
Silver	U	µg/L	0.03	0.25	M Pattanayek	7/17/2009
Thallium	0.062J	µg/L	0.03	1	M Pattanayek	7/17/2009
Vanadium	4.3J	µg/L	3.4	5	M Pattanayek	7/17/2009
Zinc	4.4J	µg/L	1.9	5	M Pattanayek	7/17/2009

Lab-Sample Number: K00002560007
Project Name: TVA-Ash Spill
Sample Description: Emory River mile 1.7
Sampler Project Name: TVA Ash Spill
Project Site No.: 3
Station No.: EMORY001.7RO
Date/Time Collected: 07/07/2009 11:17
Sampler's Name: Geoff Klein
County: ROANE - 73
Sample Matrix: Water
EFO: Knoxville
Sampling Agency: TDEC-WPC
Billing Code: 327.34-20
Send Report To: TDEC-WPC
Agency Invoiced: TDEC-WPC
Priority Date:
Date/Time Received: 07/07/2009 14:04
Received By: S Staller

Field Determinations

pH: 8.77 pH Units
Chlorine, residual:
Conductivity: 253 uMHO
Temperature: 25.34
Dissolved Oxygen: 11.28 mg/L
Other:
Flow: CFS

TEST: Mercury		METHOD: EPA 245.1				
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Mercury	0.043J	µg/L	0.029	0.2	A Wilson	7/21/2009

J - Estimated value between MDL and MQL

MDL - Method Detection Limit

MQL - Method Quantitation Limit

U - Undetected

Lab-Sample Number: K00002560008
Project Name: TVA-Ash Spill
Sample Description: Emory River mile 0.1
Sampler Project Name: TVA Ash Spill
Project Site No.: 4
Station No.: EMORY000.1RO
Date/Time Collected: 07/07/2009 11:26
Sampler's Name: Geoff Klein
County: ROANE - 73
Sample Matrix: Water
EFO: Knoxville
Sampling Agency: TDEC-WPC
Billing Code: 327.34-20
Send Report To: TDEC-WPC
Agency Invoiced: TDEC-WPC
Priority Date:
Date/Time Received: 07/07/2009 14:04
Received By: S Staller

Field Determinations
pH: 8.80 pH Units
Chlorine, residual:
Conductivity: 247 uMHO
Temperature: 25.50
Dissolved Oxygen: 11.75 mg/L
Other:
Flow: CFS

TEST: Digestion Metals		METHOD: EPA 200.2				
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Digestion Metals	07/10/2009				W Frye	7/10/2009

TEST: ICP		METHOD: EPA 200.7				
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Iron	120	µg/L	2.9	10	S Ufegbu	7/17/2009

TEST: ICP-MS		METHOD: EPA 200.8				
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Aluminum	110	µg/L	6.4	10	M Pattanayek	7/17/2009
Antimony	U	µg/L	0.33	1	M Pattanayek	7/17/2009
Arsenic	3.9J	µg/L	0.93	5	M Pattanayek	7/17/2009
Barium	51	µg/L	2.5	5	M Pattanayek	7/17/2009
Beryllium	U	µg/L	0.11	1	M Pattanayek	7/17/2009
Cadmium	U	µg/L	0.41	1	M Pattanayek	7/17/2009
Chromium	U	µg/L	2.0	5	M Pattanayek	7/17/2009
Cobalt	0.33J	µg/L	0.04	1	M Pattanayek	7/17/2009
Copper	2.8	µg/L	0.38	1	M Pattanayek	7/17/2009
Lead	0.37J	µg/L	0.10	1	M Pattanayek	7/17/2009
Manganese	59	µg/L	0.42	1	M Pattanayek	7/17/2009
Nickel	1.4	µg/L	0.25	1	M Pattanayek	7/17/2009
Selenium	U	µg/L	1.3	5	M Pattanayek	7/18/2009
Silver	U	µg/L	0.03	0.25	M Pattanayek	7/17/2009
Thallium	0.045J	µg/L	0.03	1	M Pattanayek	7/17/2009
Vanadium	U	µg/L	3.4	5	M Pattanayek	7/17/2009
Zinc	3.5J	µg/L	1.9	5	M Pattanayek	7/17/2009

Lab-Sample Number: K00002560008
Project Name: TVA-Ash Spill
Sample Description: Emory River mile 0.1
Sampler Project Name: TVA Ash Spill
Project Site No.: 4
Station No.: EMORY000.1RO
Date/Time Collected: 07/07/2009 11:26
Sampler's Name: Geoff Klein
County: ROANE - 73
Sample Matrix: Water
EFO: Knoxville
Sampling Agency: TDEC-WPC
Billing Code: 327.34-20
Send Report To: TDEC-WPC
Agency Invoiced: TDEC-WPC
Priority Date:
Date/Time Received: 07/07/2009 14:04
Received By: S Staller

Field Determinations

pH: 8.80 pH Units
Chlorine, residual:
Conductivity: 247 uMHO
Temperature: 25.50
Dissolved Oxygen: 11.75 mg/L
Other:
Flow: CFS

TEST: Mercury		METHOD: EPA 245.1				
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Mercury	0.038J	µg/L	0.029	0.2	A Wilson	7/21/2009

J - Estimated value between MDL and MQL

MDL - Method Detection Limit

MQL - Method Quantitation Limit

U - Undetected

Lab-Sample Number: K00002560009
Project Name: TVA-Ash Spill
Sample Description: Clinch River mile 2.3
Sampler Project Name: TVA Ash Spill
Project Site No.: 5
Station No.: CLINC002.3RO
Date/Time Collected: 07/07/2009 11:37
Sampler's Name: Geoff Klein
County: ROANE - 73
Sample Matrix: Water
EFO: Knoxville
Sampling Agency: TDEC-WPC
Billing Code: 327.34-20
Send Report To: TDEC-WPC
Agency Invoiced: TDEC-WPC
Priority Date:
Date/Time Received: 07/07/2009 14:04
Received By: S Staller

Field Determinations
pH: 8.32 pH Units
Chlorine, residual:
Conductivity: 272 uMHO
Temperature: 25.23
Dissolved Oxygen: 9.63 mg/L
Other:
Flow: CFS

TEST: Digestion Metals		METHOD: EPA 200.2				
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Digestion Metals	07/10/2009				W Frye	7/10/2009

TEST: ICP		METHOD: EPA 200.7				
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Iron	94	µg/L	2.9	10	S Ufegbu	7/17/2009

TEST: ICP-MS		METHOD: EPA 200.8				
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Aluminum	150	µg/L	6.4	10	M Pattanayek	7/17/2009
Antimony	U	µg/L	0.33	1	M Pattanayek	7/17/2009
Arsenic	5.6	µg/L	0.93	5	M Pattanayek	7/17/2009
Barium	59	µg/L	2.5	5	M Pattanayek	7/17/2009
Beryllium	U	µg/L	0.11	1	M Pattanayek	7/17/2009
Cadmium	U	µg/L	0.41	1	M Pattanayek	7/17/2009
Chromium	U	µg/L	2.0	5	M Pattanayek	7/17/2009
Cobalt	0.31J	µg/L	0.04	1	M Pattanayek	7/17/2009
Copper	5.8	µg/L	0.38	1	M Pattanayek	7/17/2009
Lead	0.35J	µg/L	0.10	1	M Pattanayek	7/17/2009
Manganese	45	µg/L	0.42	1	M Pattanayek	7/17/2009
Nickel	1.5	µg/L	0.25	1	M Pattanayek	7/17/2009
Selenium	U	µg/L	1.3	5	M Pattanayek	7/18/2009
Silver	U	µg/L	0.03	0.25	M Pattanayek	7/17/2009
Thallium	0.062J	µg/L	0.03	1	M Pattanayek	7/17/2009
Vanadium	5.9	µg/L	3.4	5	M Pattanayek	7/17/2009
Zinc	3.8J	µg/L	1.9	5	M Pattanayek	7/17/2009

Lab-Sample Number: K00002560009
Project Name: TVA-Ash Spill
Sample Description: Clinch River mile 2.3
Sampler Project Name: TVA Ash Spill
Project Site No.: 5
Station No.: CLINC002.3RO
Date/Time Collected: 07/07/2009 11:37
Sampler's Name: Geoff Klein
County: ROANE - 73
Sample Matrix: Water
EFO: Knoxville
Sampling Agency: TDEC-WPC
Billing Code: 327.34-20
Send Report To: TDEC-WPC
Agency Invoiced: TDEC-WPC
Priority Date:
Date/Time Received: 07/07/2009 14:04
Received By: S Staller

Field Determinations
pH: 8.32 pH Units
Chlorine, residual:
Conductivity: 272 uMHO
Temperature: 25.23
Dissolved Oxygen: 9.63 mg/L
Other:
Flow: CFS

TEST: Mercury		METHOD: EPA 245.1				
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Mercury	0.055J	µg/L	0.029	0.2	A Wilson	7/21/2009

J - Estimated value between MDL and MQL

MDL - Method Detection Limit

MQL - Method Quantitation Limit

U - Undetected

Lab-Sample Number: K00002560010
Project Name: TVA-Ash Spill
Sample Description: Clinch River TVA Discharge point
Sampler Project Name: TVA Ash Spill
Project Site No.: 5A
Station No.: KingAshOutF2
Date/Time Collected: 07/07/2009 11:44
Sampler's Name: Geoff Klein
County: ROANE - 73
Sample Matrix: Water
EFO: Knoxville
Sampling Agency: TDEC-WPC
Billing Code: 327.34-20
Send Report To: TDEC-WPC
Agency Invoiced: TDEC-WPC
Priority Date:
Date/Time Received: 07/07/2009 14:04
Received By: S Staller

Field Determinations
pH: 8.02 pH Units
Chlorine, residual:
Conductivity: 272 uMHO
Temperature: 25.34
Dissolved Oxygen: 8.38 mg/L
Other:
Flow: CFS

TEST: Digestion Metals		METHOD: EPA 200.2				
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Digestion Metals	07/10/2009				W Frye	7/10/2009

TEST: ICP		METHOD: EPA 200.7				
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Iron	150	µg/L	2.9	10	S Ufegbu	7/17/2009

TEST: ICP-MS		METHOD: EPA 200.8				
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Aluminum	200	µg/L	6.4	10	M Pattanayek	7/17/2009
Antimony	U	µg/L	0.33	1	M Pattanayek	7/17/2009
Arsenic	5.4	µg/L	0.93	5	M Pattanayek	7/17/2009
Barium	58	µg/L	2.5	5	M Pattanayek	7/17/2009
Beryllium	U	µg/L	0.11	1	M Pattanayek	7/17/2009
Cadmium	U	µg/L	0.41	1	M Pattanayek	7/17/2009
Chromium	U	µg/L	2.0	5	M Pattanayek	7/17/2009
Cobalt	0.34J	µg/L	0.04	1	M Pattanayek	7/17/2009
Copper	5.3	µg/L	0.38	1	M Pattanayek	7/17/2009
Lead	0.41J	µg/L	0.10	1	M Pattanayek	7/17/2009
Manganese	52	µg/L	0.42	1	M Pattanayek	7/17/2009
Nickel	1.5	µg/L	0.25	1	M Pattanayek	7/17/2009
Selenium	U	µg/L	1.3	5	M Pattanayek	7/18/2009
Silver	U	µg/L	0.03	0.25	M Pattanayek	7/17/2009
Thallium	0.051J	µg/L	0.03	1	M Pattanayek	7/17/2009
Vanadium	5.8	µg/L	3.4	5	M Pattanayek	7/17/2009
Zinc	3.4J	µg/L	1.9	5	M Pattanayek	7/17/2009

Lab-Sample Number: K00002560010
Project Name: TVA-Ash Spill
Sample Description: Clinch River TVA Discharge point
Sampler Project Name: TVA Ash Spill
Project Site No.: 5A
Station No.: KingAshOutF2
Date/Time Collected: 07/07/2009 11:44
Sampler's Name: Geoff Klein
County: ROANE - 73
Sample Matrix: Water
EFO: Knoxville
Sampling Agency: TDEC-WPC
Billing Code: 327.34-20
Send Report To: TDEC-WPC
Agency Invoiced: TDEC-WPC
Priority Date:
Date/Time Received: 07/07/2009 14:04
Received By: S Staller

Field Determinations

pH: 8.02 pH Units
Chlorine, residual:
Conductivity: 272 uMHO
Temperature: 25.34
Dissolved Oxygen: 8.38 mg/L
Other:
Flow: CFS

TEST: Mercury		METHOD: EPA 245.1				
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Mercury	0.046J	µg/L	0.029	0.2	A Wilson	7/21/2009

J - Estimated value between MDL and MQL

MDL - Method Detection Limit

MQL - Method Quantitation Limit

U - Undetected

Lab-Sample Number:	K00002560011	Field Determinations	
Project Name:	TVA-Ash Spill	pH:	8.77 pH Units
Sample Description:	Clinch River mile 4.5 near Sugar Grove Valley R	Chlorine, residual:	
Sampler Project Name:	TVA Ash Spill	Conductivity:	273 uMHO
Project Site No.:	6	Temperature:	25.20
Station No.:	CLINC004.5RO	Dissolved Oxygen:	12.07 mg/L
Date/Time Collected:	07/07/2009 11:54	Other:	
Sampler's Name:	Geoff Klein	Flow:	CFS
County:	ROANE - 73		
Sample Matrix:	Water		
EFO:	Knoxville		
Sampling Agency:	TDEC-WPC		
Billing Code:	327.34-20		
Send Report To:	TDEC-WPC		
Agency Invoiced:	TDEC-WPC		
Priority Date:			
Date/Time Received:	07/07/2009 14:04		
Received By:	S Staller		

TEST: Digestion Metals		METHOD: EPA 200.2				
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Digestion Metals	07/10/2009				W Frye	7/10/2009

TEST: ICP		METHOD: EPA 200.7				
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Iron	62	µg/L	2.9	10	S Ufegbu	7/17/2009

TEST: ICP-MS		METHOD: EPA 200.8				
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Aluminum	64	µg/L	6.4	10	M Pattanayek	7/17/2009
Antimony	0.51J	µg/L	0.33	1	M Pattanayek	7/17/2009
Arsenic	2.7J	µg/L	0.93	5	M Pattanayek	7/17/2009
Barium	45	µg/L	2.5	5	M Pattanayek	7/17/2009
Beryllium	U	µg/L	0.11	1	M Pattanayek	7/17/2009
Cadmium	U	µg/L	0.41	1	M Pattanayek	7/17/2009
Chromium	U	µg/L	2.0	5	M Pattanayek	7/17/2009
Cobalt	0.26J	µg/L	0.04	1	M Pattanayek	7/17/2009
Copper	3.2	µg/L	0.38	1	M Pattanayek	7/17/2009
Lead	0.28J	µg/L	0.10	1	M Pattanayek	7/17/2009
Manganese	37	µg/L	0.42	1	M Pattanayek	7/17/2009
Nickel	1.5	µg/L	0.25	1	M Pattanayek	7/17/2009
Selenium	U	µg/L	1.3	5	M Pattanayek	7/18/2009
Silver	0.032J	µg/L	0.03	0.25	M Pattanayek	7/17/2009
Thallium	0.58J	µg/L	0.03	1	M Pattanayek	7/17/2009
Vanadium	5.4	µg/L	3.4	5	M Pattanayek	7/17/2009
Zinc	8.5	µg/L	1.9	5	M Pattanayek	7/17/2009

Lab-Sample Number:	K00002560011	Field Determinations	
Project Name:	TVA-Ash Spill	pH:	8.77 pH Units
Sample Description:	Clinch River mile 4.5 near Sugar Grove Valley R	Chlorine, residual:	
Sampler Project Name:	TVA Ash Spill	Conductivity:	273 uMHO
Project Site No.:	6	Temperature:	25.20
Station No.:	CLINC004.5RO	Dissolved Oxygen:	12.07 mg/L
Date/Time Collected:	07/07/2009 11:54	Other:	
Sampler's Name:	Geoff Klein	Flow:	CFS
County:	ROANE - 73		
Sample Matrix:	Water		
EFO:	Knoxville		
Sampling Agency:	TDEC-WPC		
Billing Code:	327.34-20		
Send Report To:	TDEC-WPC		
Agency Invoiced:	TDEC-WPC		
Priority Date:			
Date/Time Received:	07/07/2009 14:04		
Received By:	S Staller		

TEST: Mercury		METHOD: EPA 245.1				
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Mercury	U	µg/L	0.029	0.2	A Wilson	7/21/2009

J - Estimated value between MDL and MQL

MDL - Method Detection Limit

MQL - Method Quantitation Limit

U - Undetected